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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/755,053	01/08/2001	Christophe Bertez	S.5229 US - OP/MM	6760

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EXAMINER

JOHNSON, JONATHAN J

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 06/19/2002

11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

09/755,053

Applicant(s)

BERTEZ ET AL.

Examiner

Jonathan Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-21 is/are pending in the application.
- 4a) Of the above claim(s) 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-15 and 17-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-9 and 11-21 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:



DETAILED ACTION

Response to Amendment

Applicant's Amendments and accompanying remarks submitted as Paper No. 10 on 4-3-02 have been entered and carefully considered. The amendments are not found to patentably distinguish the claims over the prior art and Applicant's arguments are not found persuasive of patentability for reasons set forth herein below.

Election/Restrictions

Newly submitted claim 16 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the apparatus can be used to cut or weld an adhesive.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 10 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03. The examiner notes that applicant has cancelled Claim 10 in his response submitted on 11/16/01.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

- (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
- (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 17-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Nielsen (6,175,096). With respect to Claim 17, Nielsen teaches a method of cutting a workpiece having a laser generator that produces an output beam (Column 1, Lines 40-65); an optical focusing device arranged in a path of the laser beam (Figure 1a, item 1a); at least one source of an assist gas for the beam (Column 2, Lines 45-60); moving the laser cutting device with respect to the workpiece so as to cut the workpiece (Column 2, Lines 35-50); wherein the optical focusing device is a multifocus device so that a beam exiting the focusing device is simultaneously focused at a plurality of separate focusing points (Figure 2a, Items F1...Fn).

With respect to Claim 18, the teachings of Nielsen is the same as relied upon in the rejection of Claim 17. Nielsen teaches the workpiece is stainless steel (Column 2, Lines 50-60).

With respect to Claim 19, the teachings of Nielsen is the same as relied upon in the rejection of Claim 17. Nielsen teaches the use a bifocal lens (Figure 2a, item 21a).

With respect to Claim 20, the teachings of Nielsen are the same as relied upon in the rejection of Claim 19. Nielsen teaches the focusing points includes a first focusing point near an

upper surface and a second focusing point near the lower surface (Figure 1a, items F1 and F2 and Column 3, Lines 1-15).

With respect to Claim 21, the teachings of Nielsen are the same as relied upon in the rejection of Claim 17. Nielsen teaches the focusing points includes a first focusing point near an upper surface and a second focusing point near the lower surface (Figure 1a, items F1 and F2 and Column 3, Lines 1-15).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen (6,175,096) in view of Couch, Jr. et al. (5,653,896). With respect to Claim 1, Nielsen teaches a method of cutting a workpiece made of stainless steel (Column 1, Lines 25-35 and Column 2, Lines 50-56) by the use of at least one transparent or reflecting optical means for focusing at least one laser beam in which the optical means is of the multifocus type (Figure 1a and Item 1a). Nielsen teaches the use of an assist gas using nitrogen but does not specify an oxygen or oxygen/nitrogen mixture (Column 1, Lines 45-55). Couch, Jr. et al. teaches an assist gas for said laser beam cutting, wherein the assist gas is oxygen or an oxygen/nitrogen mixture

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(abstract and Column 7, Lines 1-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the assist gas of Nielsen to utilize an oxygen/nitrogen mixture in order to produce a high quality kerf in stainless steel (see Couch, Jr. et al. Claim 1).

With respect to Claims 2 and 11, the teachings of Nielsen and Couch, Jr. et al. are the same as relied upon in the rejection of Claim 1. Nielsen teaches the multifocus optical means is chosen from a bifocal lens (Claim 3).

With respect to Claims 3 and 12, the teachings of Nielsen and Couch, Jr. et al. are the same as relied upon in the rejection of Claim 1. Couch, Jr. et al. teaches an assist gas for said laser beam cutting, wherein the assist gas is oxygen or an oxygen/nitrogen mixture (abstract and Column 7, Lines 1-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the assist gas of Nielsen to utilize an oxygen/nitrogen mixture in order to produce a high quality kerf in stainless steel (see Couch, Jr. et al. Claim 1). It would have been obvious to select a nitrogen content between 92% to 98% in order to produce a high quality kerf in stainless steel (see Couch, Jr. et al.). The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be a prima facie case of obviousness to select a value in a known range by optimization for the best results. In re Aller, 105 USPQ 233.

With respect to Claims 4 and 13, the teachings of Nielsen and Couch, Jr. et al. are the same as relied upon in the rejection of Claim 1. Nielsen teaches the use of an oxygen assist gas without any argon impurities (Column 7, Lines 1-4).

With respect to Claims 5 and 14, the teachings of Nielsen and Couch, Jr. et al. are the same as relied upon in the rejection of Claim 1. Couch, Jr. et al. teaches an assist gas for said laser beam cutting, wherein the assist gas is oxygen or an oxygen/nitrogen mixture (abstract and Column 7, Lines 1-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the assist gas of Nielsen to utilize an oxygen/nitrogen mixture in order to produce a high quality kerf in stainless steel (see Couch, Jr. et al. Claim 1). It would have been obvious to select an oxygen content between 150 ppm and 5% while the rest is nitrogen in order to produce a high quality kerf in stainless steel (see Couch, Jr. et al.). The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be a prima facie case of obviousness to select a value in a known range by optimization for the best results. In re Aller, 105 USPQ 233.

With respect to Claim 6 and 15, the teachings of Nielsen and Couch, Jr. et al. are the same as relied upon in the rejection of Claim 1. Nielsen teaches the optical means is arranged so as to obtain at least one focusing point positioned near the upper surface of the workpiece to be cut (Figure 1a, item F1) and at least one second focusing point positioned near the lower surface

of the workpiece to be cut and in the thickness of the latter (Figure 1a, item F2) wherein the first focusing point is positioned so as to coincide with the upper surface (Figure 1a, F1).

With respect to Claim 7, the teachings of Nielsen and Couch, Jr. et al. are the same as relied upon in the rejection of Claim 1. Nielsen teaches the thickness of the workpiece can be as high as 15 mm, however it would have been obvious to one of ordinary skill in the art at the time of the invention to decrease the thickness of the workpiece to be cut to be between 1.5mm and 5mm in order to minimize slag and increase the cut quality (see Nielsen Column 1, Lines 30-37).

With respect to Claim 8, the teachings of Nielsen and Couch, Jr. et al. are the same as relied upon in the rejection of Claim 1. Nielsen teaches the workpiece is chosen from plates (Claim 1).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nielsen and Couch, Jr. et al. (5,618,452) as applied to Claim 1 above and further in view of McNeill (4,781,907). McNeill teaches a nitrogen/oxygen mixture obtained from air treated by a membrane system (Column 1, Line 40 through Column 2, Line 65). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the separation technique of Nielsen and Couch, Jr. et al. to utilize the membrane system in order to achieve a relatively pure nitrogen stream (see McNeill Column 1, Lines 40-47).

Response to Arguments

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., cutting the workpiece and subsequently separating the two workpieces) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant broadly claims "cutting a workpiece" which is taught by Matubara et al. in Figure 1, Item 4a. The rejection is maintained despite applicant's traversal.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a multifocus device so that the focusing device is simultaneously focused at a plurality of separate focusing points) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Claim 1 only requires a "multifocus type" optical means. Applicant has not claimed any limitation regarding simultaneously focusing the plurality of focusing points. Therefore, it is the examiner's position that Matubara et al. satisfies this requirement in their use of a bifocal lens (see Matubara et al. Claim 3).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Johnson whose telephone number is 703-308-0667. The examiner can normally be reached on M-Th 7AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 703-308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

jj
June 15, 2002


M. ALEXANDRA ELVE
PRIMARY EXAMINER